OIPE JC98
APR 0 5 2004
PATENT & TRADEMARK OFFICE

FIG. 1

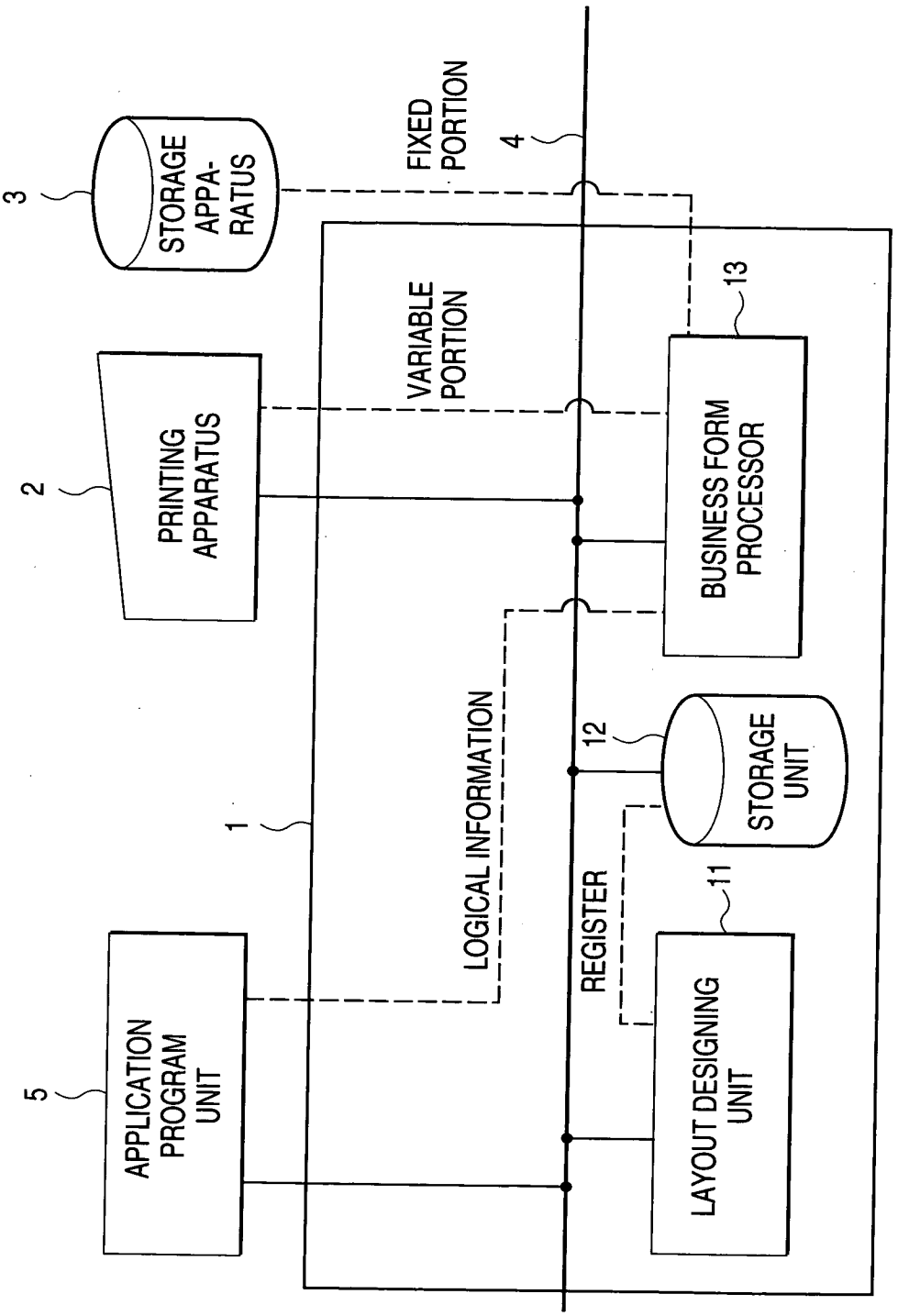


FIG. 2

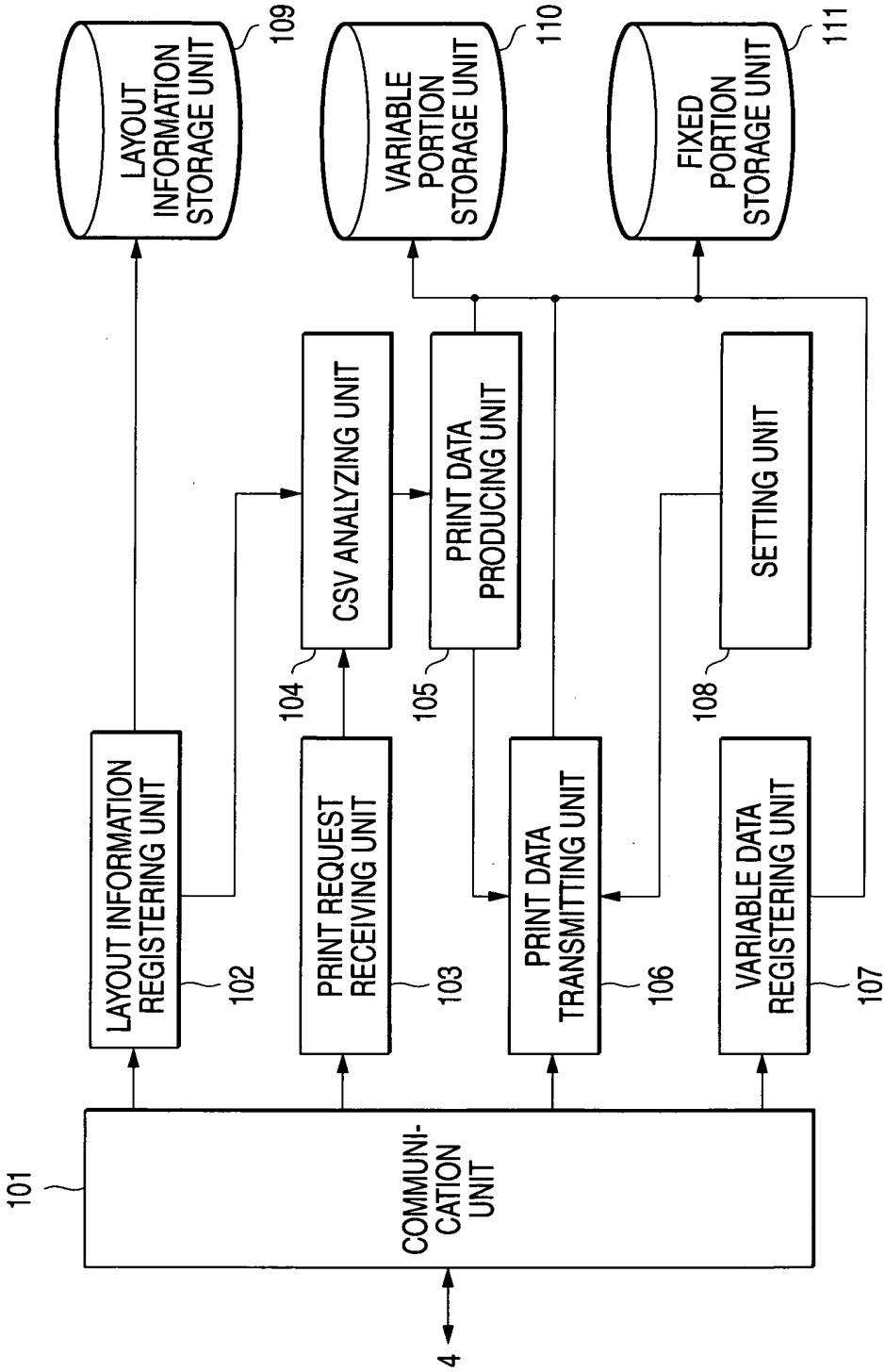

LAYOUT INFORMATION STORAGE UNIT
109
VARIABLE PORTION STORAGE UNIT
110
FIXED PORTION STORAGE UNIT
111
CSV ANALYZING UNIT
104
PRINT DATA PRODUCING UNIT
105
SETTING UNIT
108
LAYOUT INFORMATION REGISTERING UNIT
102
PRINT REQUEST RECEIVING UNIT
103
PRINT DATA TRANSMITTING UNIT
106
VARIABLE DATA REGISTERING UNIT
107
COMMUNI-CATION UNIT
101
4

FIG. 3

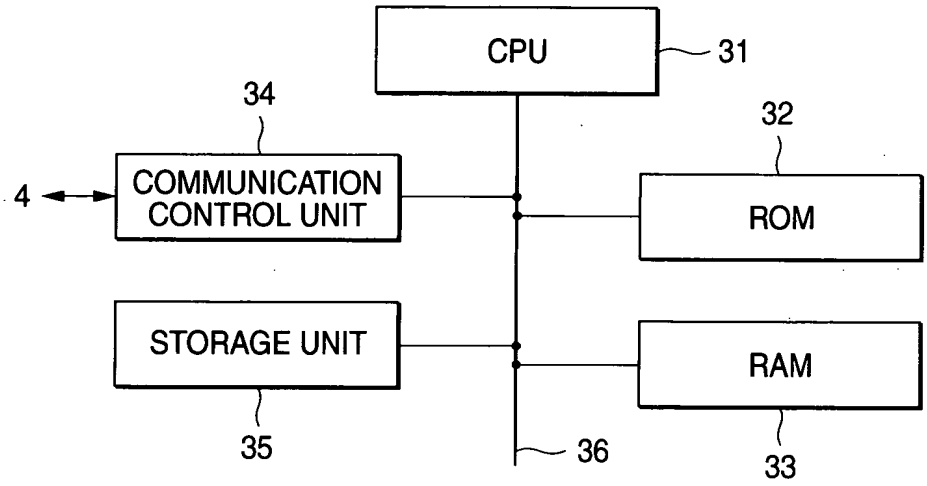

CPU
31
34
32
4
COMMUNICATION CONTROL UNIT
ROM
STORAGE UNIT
RAM
35
36
33

FIG. 4

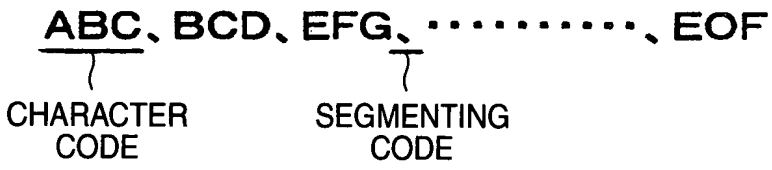

ABC、BCD、EFG、・・・・・・・・・、EOF
CHARACTER CODE
SEGMENTING CODE

FIG. 5

ITEM SORT	ITEM ATTRIBUTE	ACQUISITION CSV	AUXILIARY INFORMATION
CHARACTER	VARIABLE	1	POSITION (x, y) FONT SIZE CHARACTER ATTRIBUTE (MODIFICATION)
NUMERAL VALUE	VARIABLE	1	POSITION (x, y) FONT SIZE NUMERAL VALUE ATTRIBUTE (MODIFICATION, NOTATION FORMAT)
FIGURE	FIXED	0	POSITION (x, y) FIGURE TYPE (LINE, CIRCLE ETC.) FIGURE ATTRIBUTE
IMAGE	FIXED	0	POSITION (x, y) IMAGE FILE IMAGE ATTRIBUTE
⋮	⋮	⋮	⋮

FIG. 6

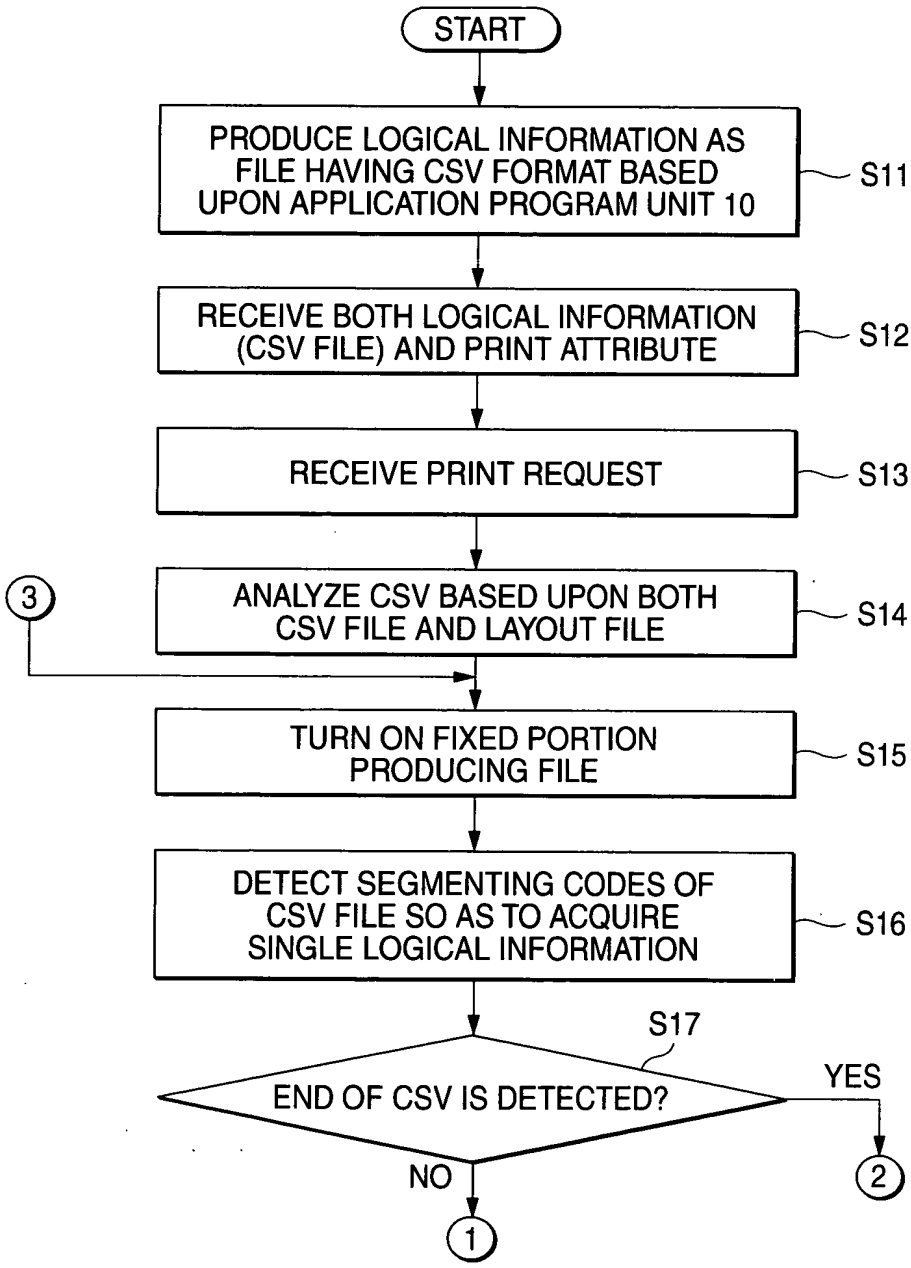

START
PRODUCE LOGICAL INFORMATION AS FILE HAVING CSV FORMAT BASED UPON APPLICATION PROGRAM UNIT 10
S11
RECEIVE BOTH LOGICAL INFORMATION (CSV FILE) AND PRINT ATTRIBUTE
S12
RECEIVE PRINT REQUEST
S13
3
ANALYZE CSV BASED UPON BOTH CSV FILE AND LAYOUT FILE
S14
TURN ON FIXED PORTION PRODUCING FILE
S15
DETECT SEGMENTING CODES OF CSV FILE SO AS TO ACQUIRE SINGLE LOGICAL INFORMATION
S16
S17
END OF CSV IS DETECTED?
YES
NO
2
1

FIG. 7

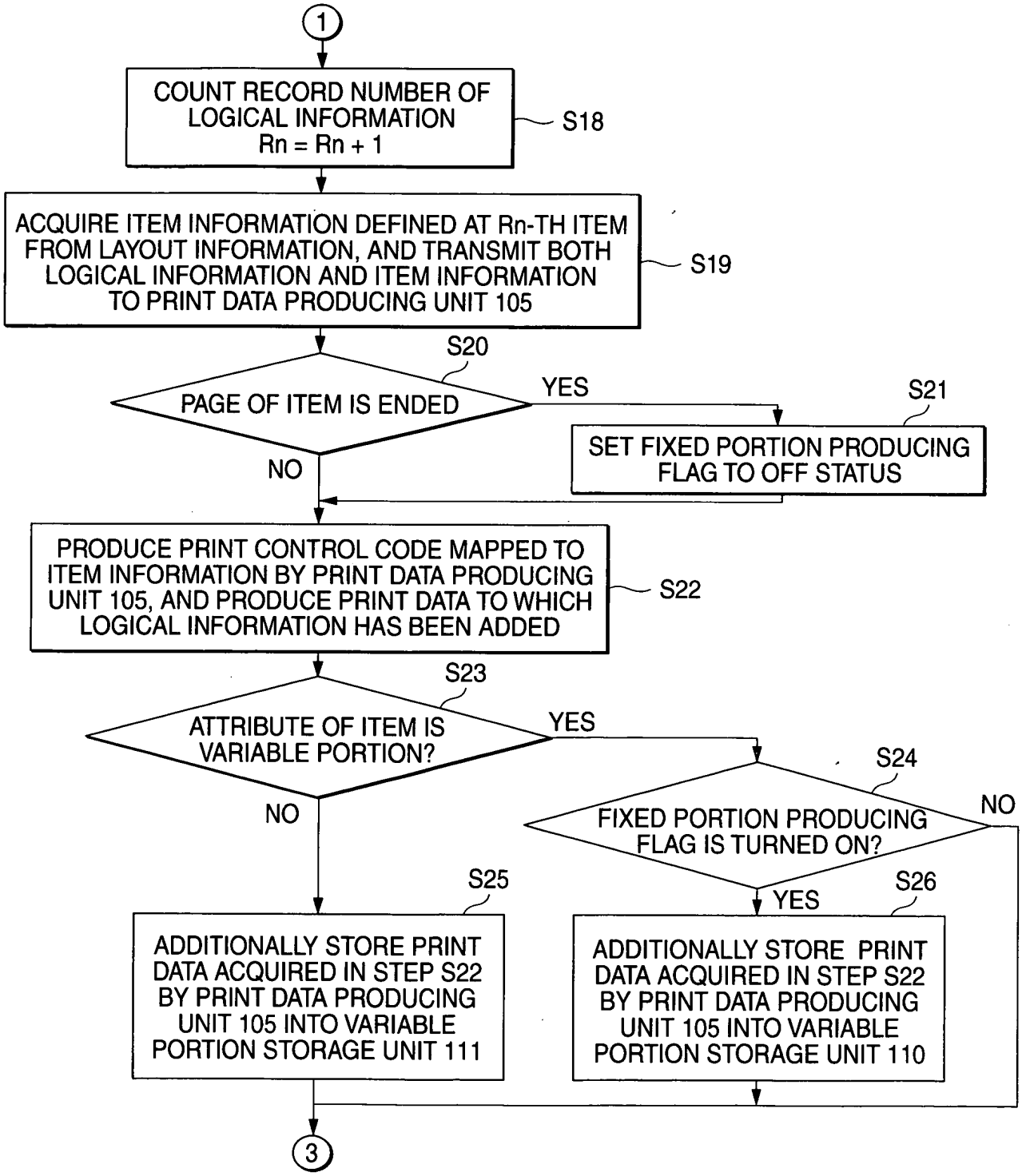

1
COUNT RECORD NUMBER OF LOGICAL INFORMATION Rn = Rn + 1
S18
ACQUIRE ITEM INFORMATION DEFINED AT Rn-TH ITEM FROM LAYOUT INFORMATION, AND TRANSMIT BOTH LOGICAL INFORMATION AND ITEM INFORMATION TO PRINT DATA PRODUCING UNIT 105
S19
S20
PAGE OF ITEM IS ENDED
YES
S21
SET FIXED PORTION PRODUCING FLAG TO OFF STATUS
NO
PRODUCE PRINT CONTROL CODE MAPPED TO ITEM INFORMATION BY PRINT DATA PRODUCING UNIT 105, AND PRODUCE PRINT DATA TO WHICH LOGICAL INFORMATION HAS BEEN ADDED
S22
S23
ATTRIBUTE OF ITEM IS VARIABLE PORTION?
YES
S24
FIXED PORTION PRODUCING FLAG IS TURNED ON?
NO
NO
S25
ADDITIONALLY STORE PRINT DATA ACQUIRED IN STEP S22 BY PRINT DATA PRODUCING UNIT 105 INTO VARIABLE PORTION STORAGE UNIT 111
YES
S26
ADDITIONALLY STORE PRINT DATA ACQUIRED IN STEP S22 BY PRINT DATA PRODUCING UNIT 105 INTO VARIABLE PORTION STORAGE UNIT 110
3

FIG. 8

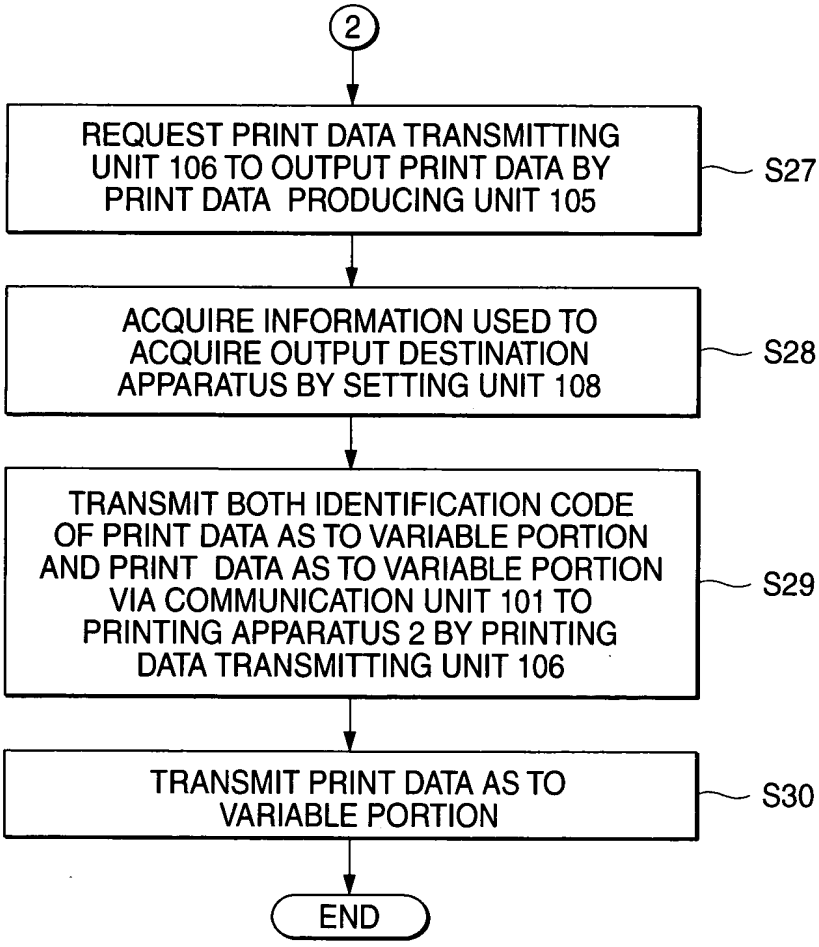

2
REQUEST PRINT DATA TRANSMITTING UNIT 106 TO OUTPUT PRINT DATA BY PRINT DATA PRODUCING UNIT 105
S27
ACQUIRE INFORMATION USED TO ACQUIRE OUTPUT DESTINATION APPARATUS BY SETTING UNIT 108
S28
TRANSMIT BOTH IDENTIFICATION CODE OF PRINT DATA AS TO VARIABLE PORTION AND PRINT DATA AS TO VARIABLE PORTION VIA COMMUNICATION UNIT 101 TO PRINTING APPARATUS 2 BY PRINTING DATA TRANSMITTING UNIT 106
S29
TRANSMIT PRINT DATA AS TO VARIABLE PORTION
S30
END

FIG. 9

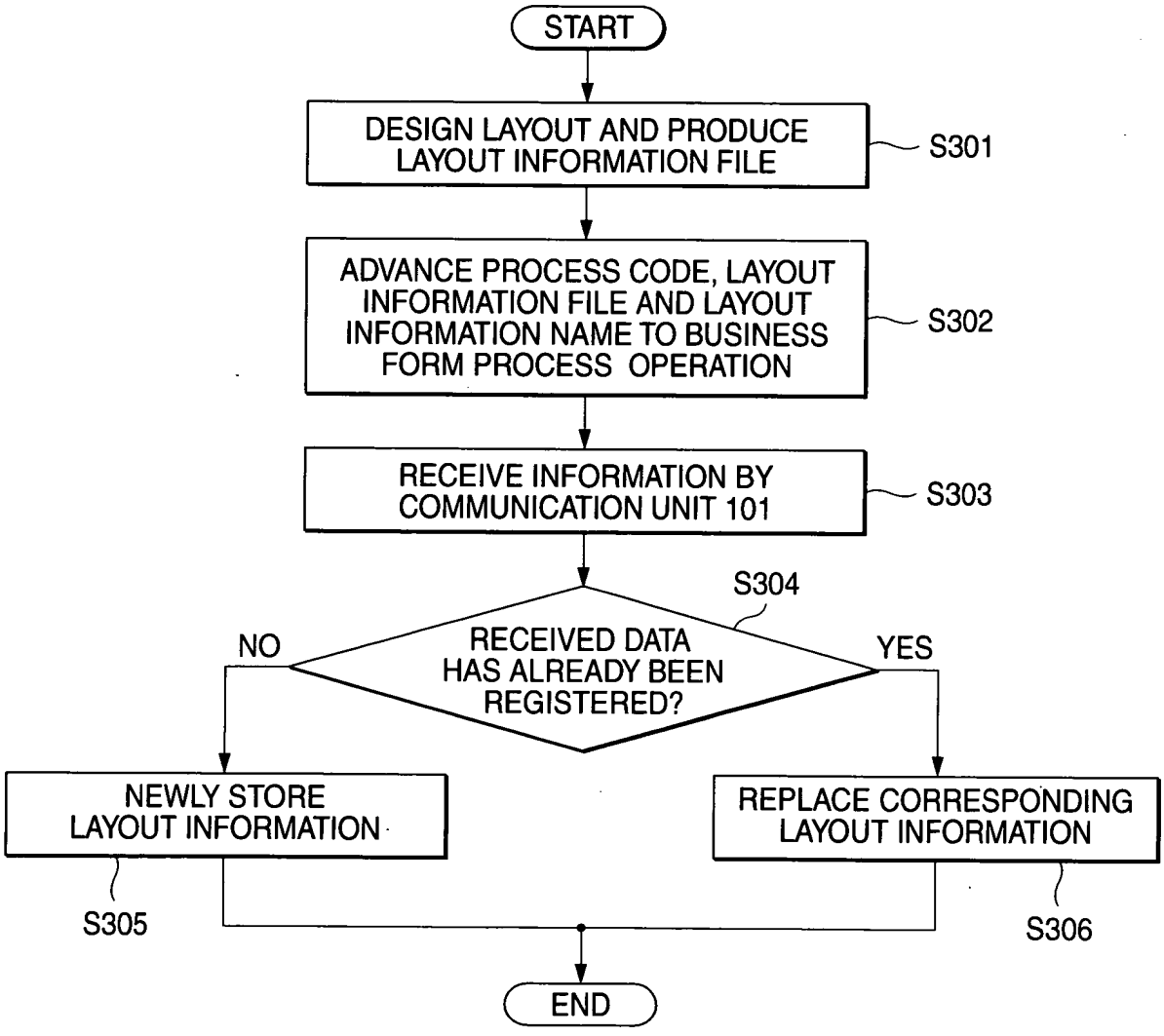

START
DESIGN LAYOUT AND PRODUCE LAYOUT INFORMATION FILE
S301
ADVANCE PROCESS CODE, LAYOUT INFORMATION FILE AND LAYOUT INFORMATION NAME TO BUSINESS FORM PROCESS OPERATION
S302
RECEIVE INFORMATION BY COMMUNICATION UNIT 101
S303
S304
RECEIVED DATA HAS ALREADY BEEN REGISTERED?
NO
YES
NEWLY STORE LAYOUT INFORMATION
S305
REPLACE CORRESPONDING LAYOUT INFORMATION
S306
END

FIG. 10

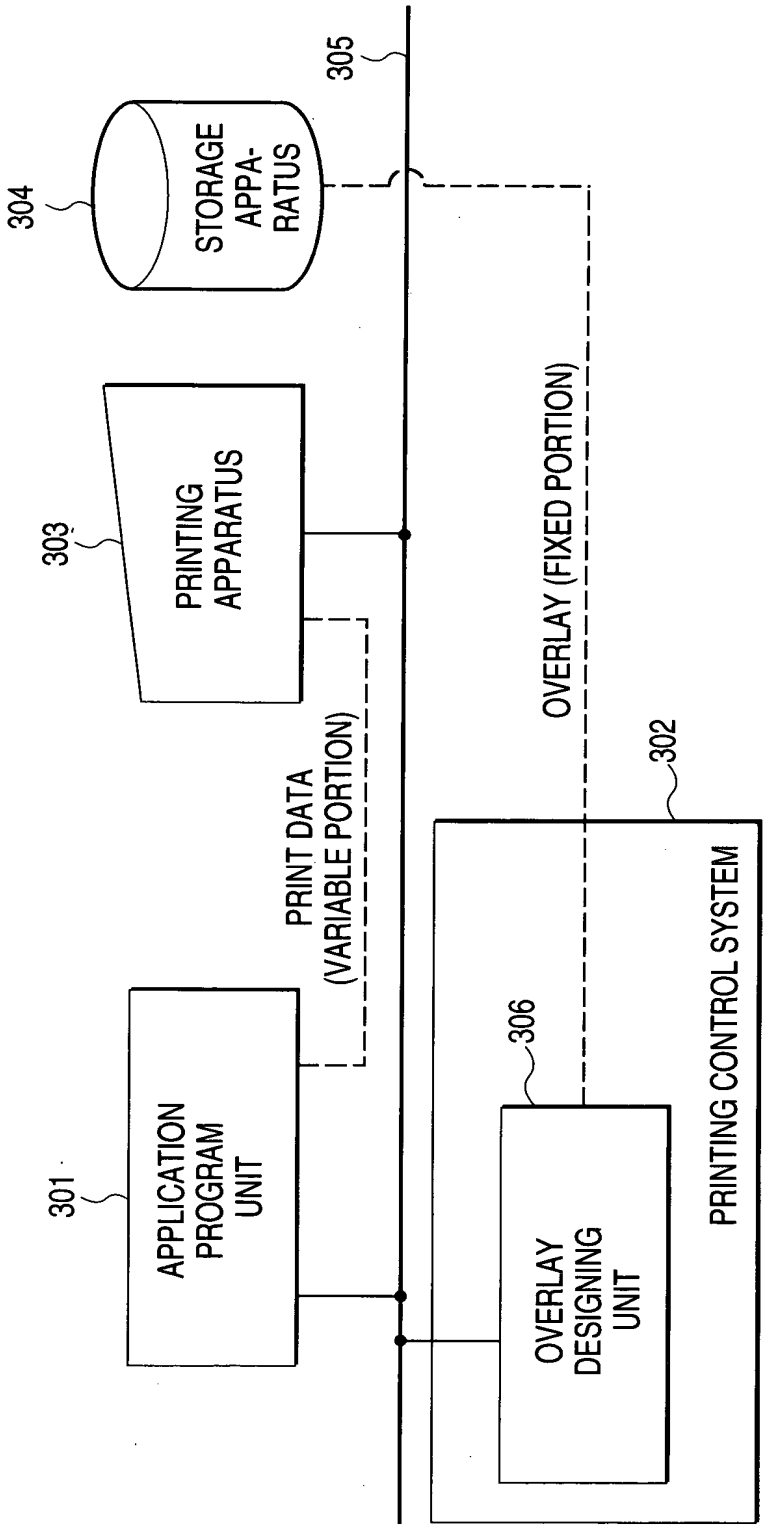

304
STORAGE APPA-RATUS
305
303
PRINTING APPARATUS
OVERLAY (FIXED PORTION)
PRINT DATA (VARIABLE PORTION)
302
301
APPLICATION PROGRAM UNIT
306
OVERLAY DESIGNING UNIT
PRINTING CONTROL SYSTEM

FIG. 11

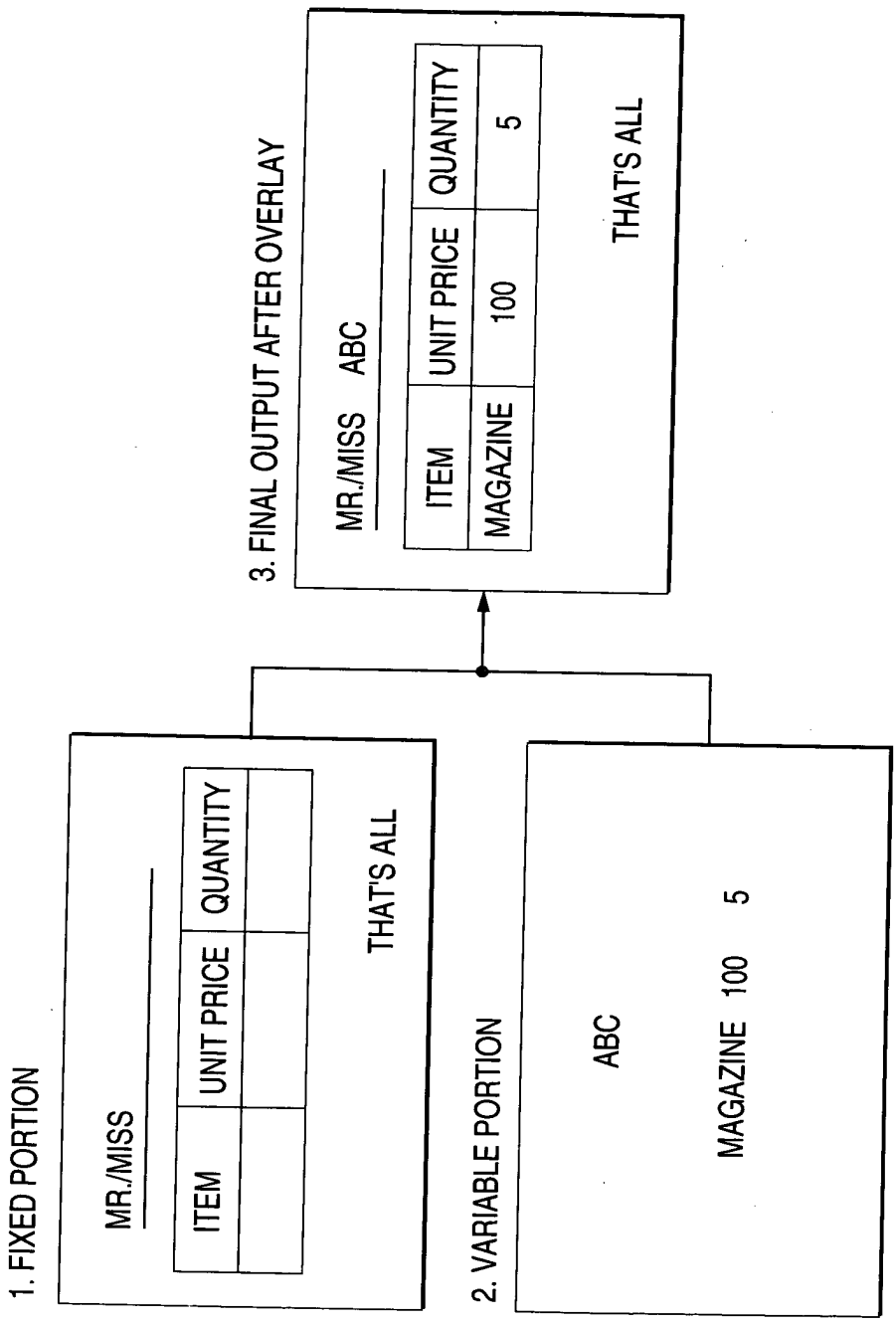
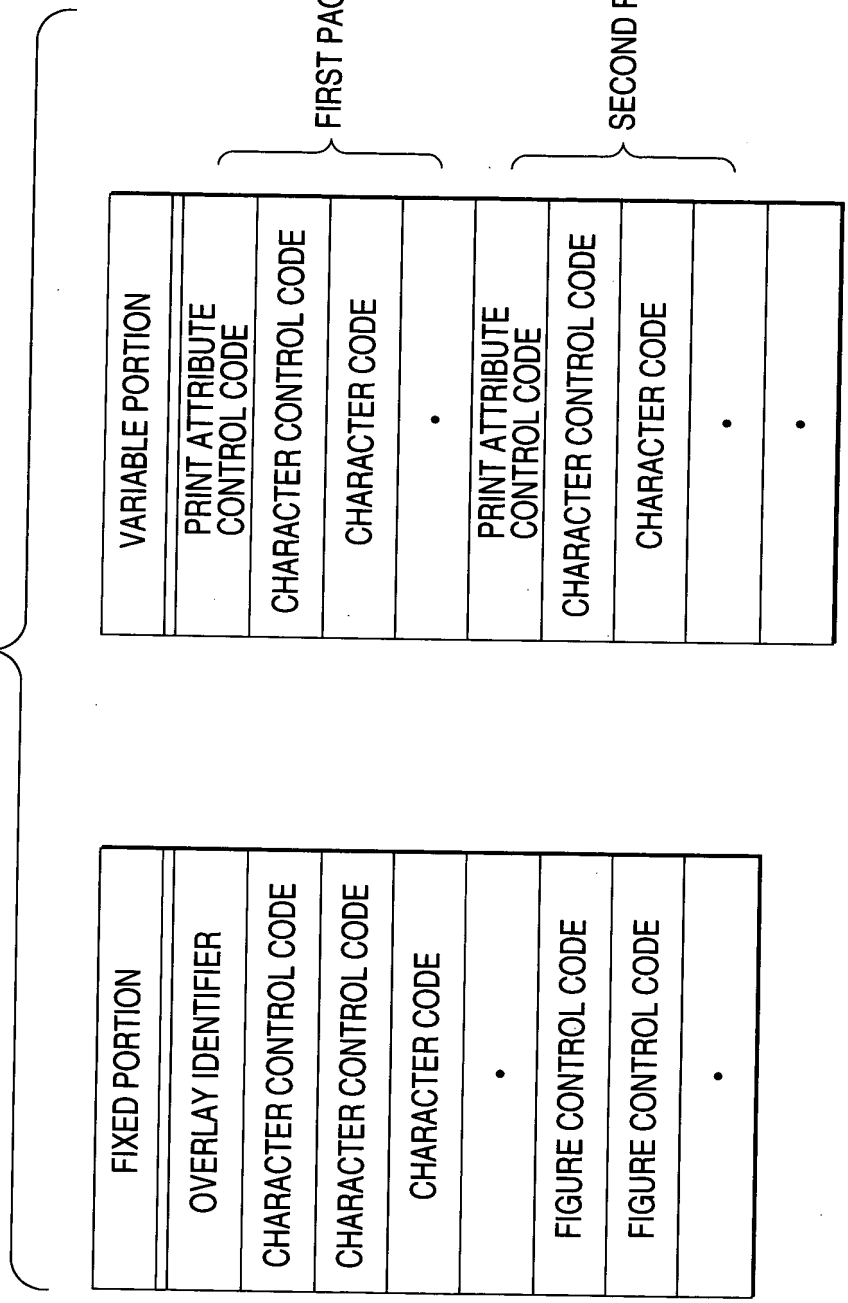

1. FIXED PORTION
MR./MISS
ITEM
UNIT PRICE
QUANTITY
THAT'S ALL
2. VARIABLE PORTION
ABC
MAGAZINE 100 5
3. FINAL OUTPUT AFTER OVERLAY
MR./MISS ABC
ITEM
UNIT PRICE
QUANTITY
MAGAZINE
100
5
THAT'S ALL

FIG. 12


FIXED PORTION
OVERLAY IDENTIFIER
CHARACTER CONTROL CODE
CHARACTER CONTROL CODE
CHARACTER CODE
•
FIGURE CONTROL CODE
FIGURE CONTROL CODE
•
VARIABLE PORTION
PRINT ATTRIBUTE CONTROL CODE
CHARACTER CONTROL CODE
CHARACTER CODE
•
PRINT ATTRIBUTE CONTROL CODE
CHARACTER CONTROL CODE
CHARACTER CODE
•
•
FIRST PAGE
SECOND PAGE